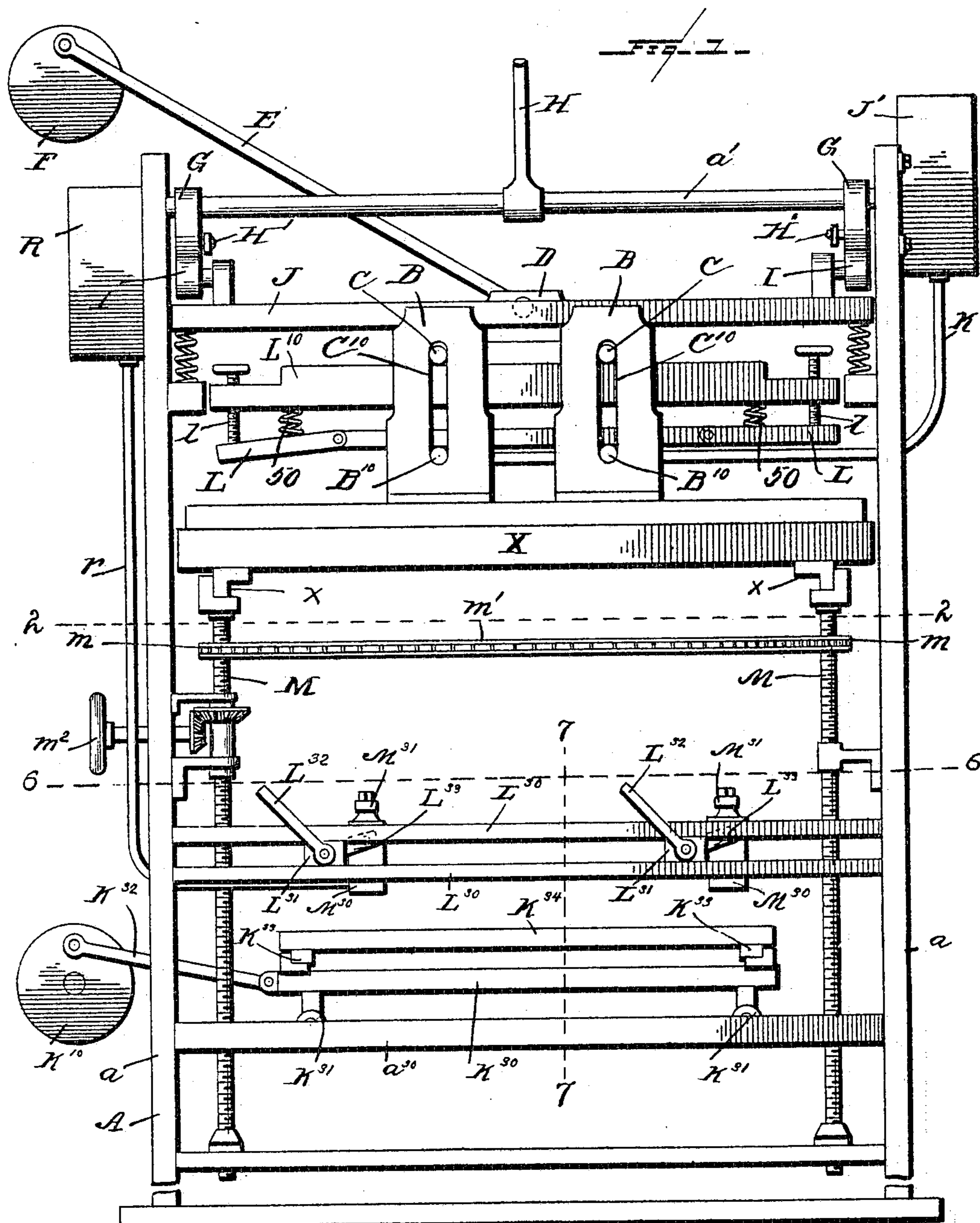


No. 798,760.

PATENTED SEPT. 5, 1905.

P. H. BARZ.
POLISHING MACHINE.
APPLICATION FILED APR. 24, 1905.

4 SHEETS—SHEET 1.



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4 SHEETS—SHEET 2.

FIG. 1

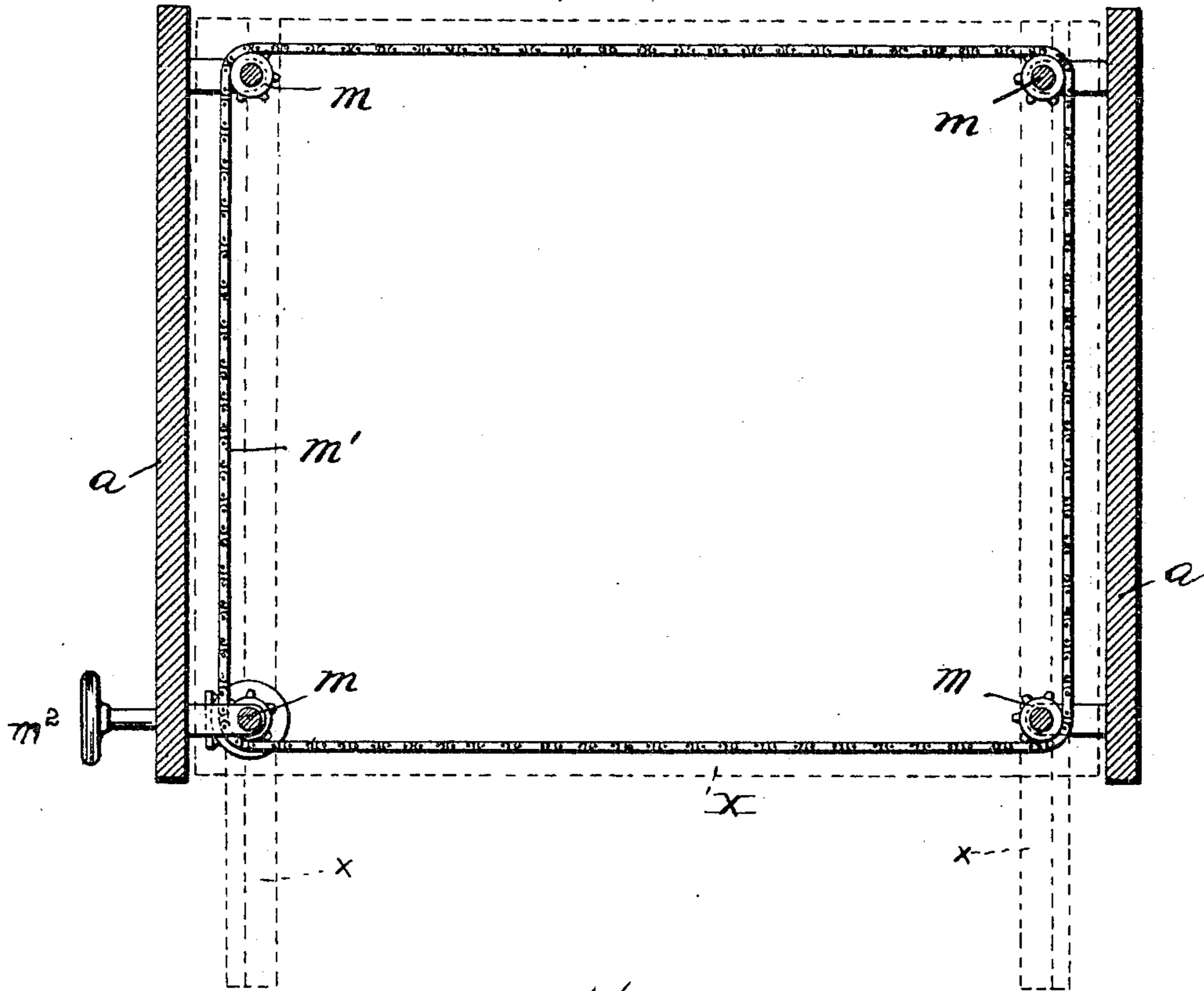
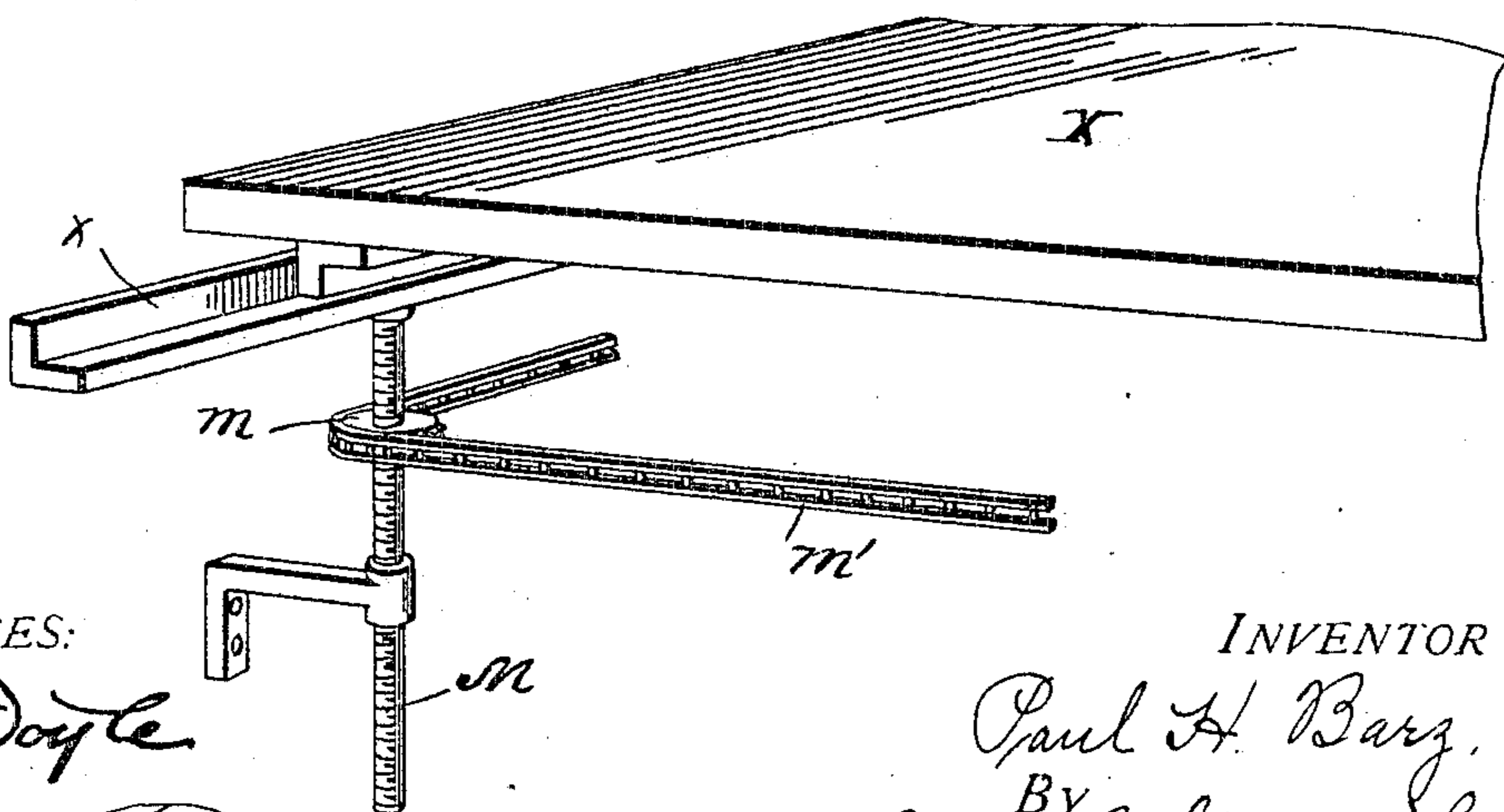


FIG. 2



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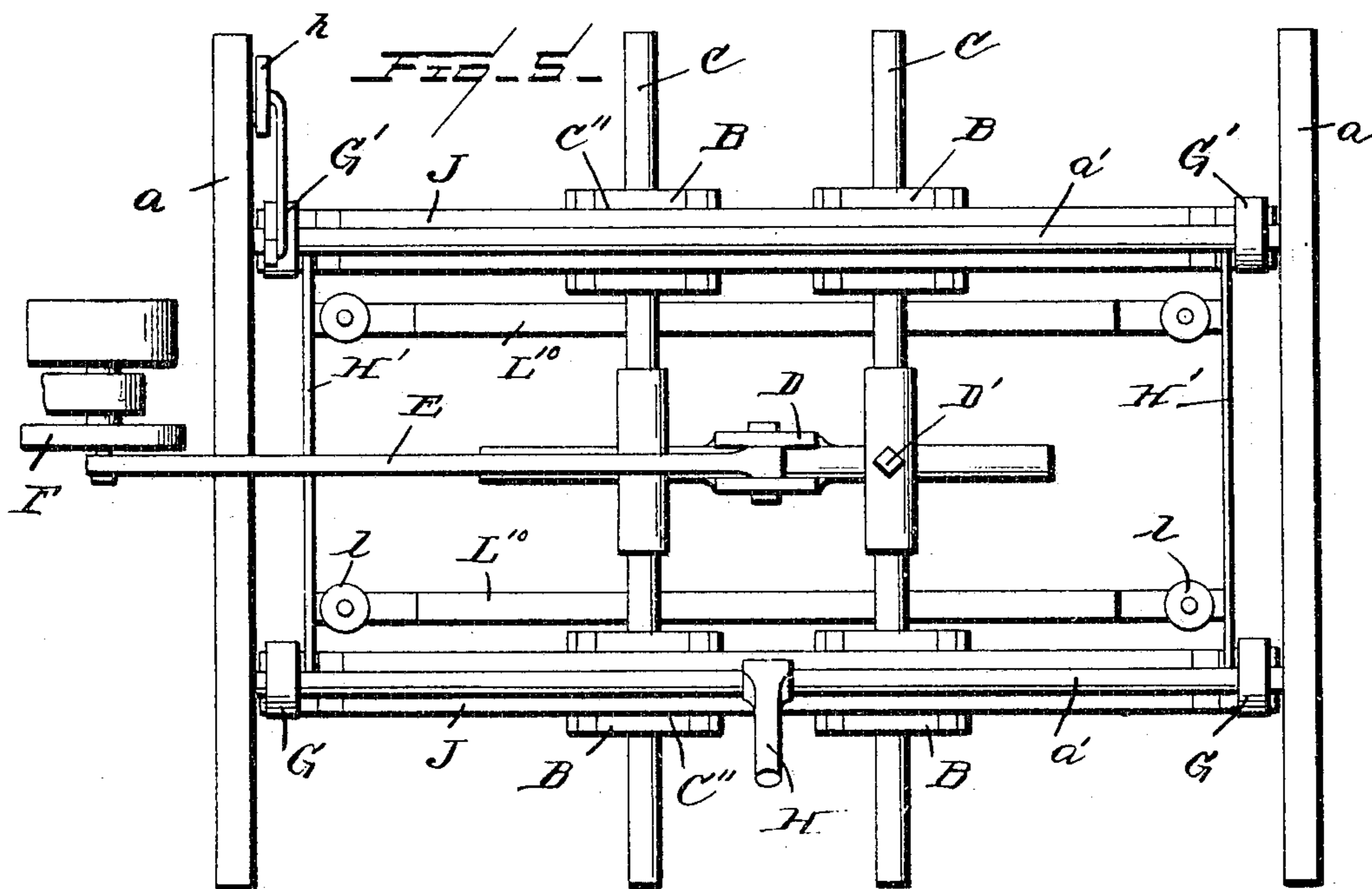
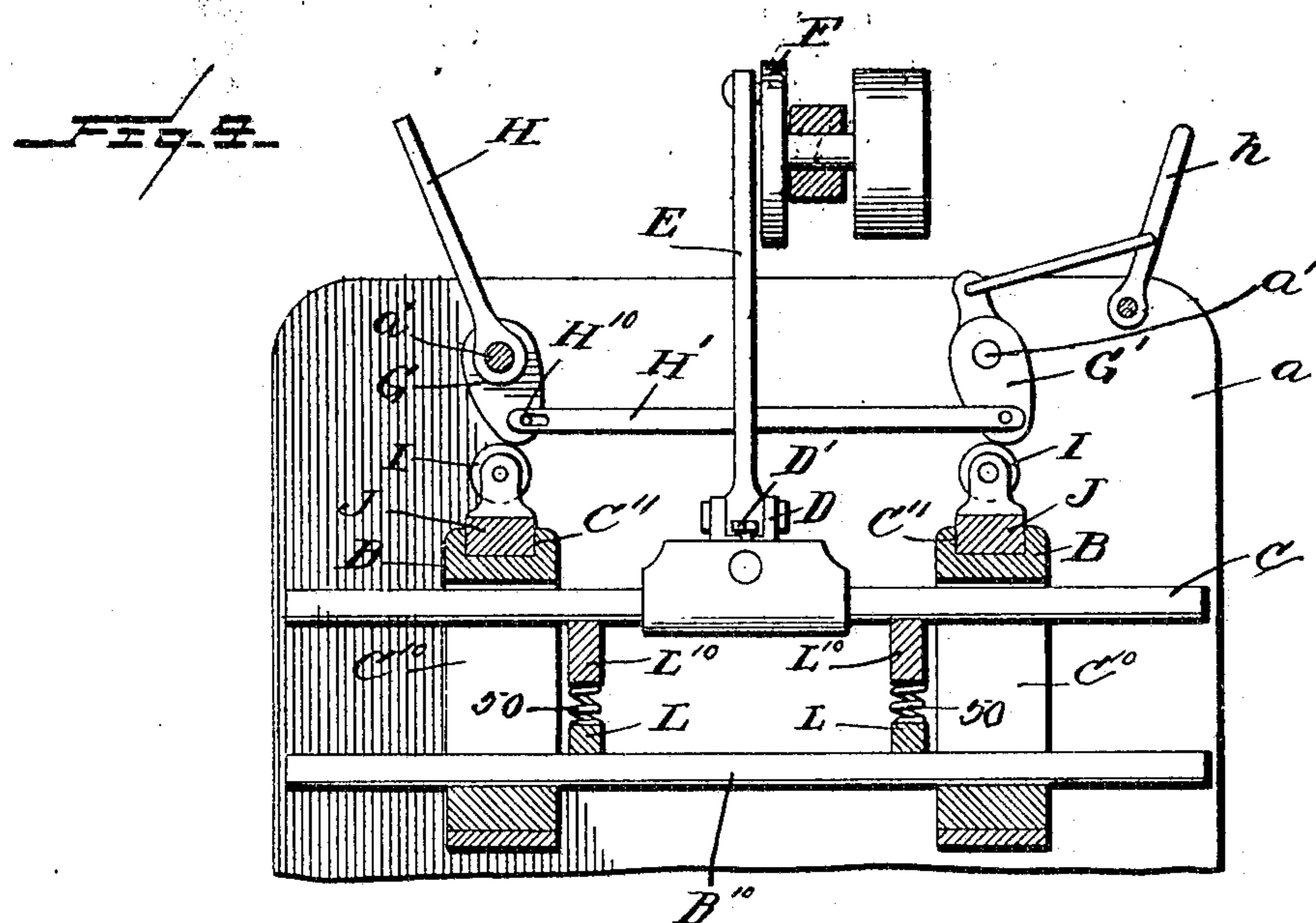
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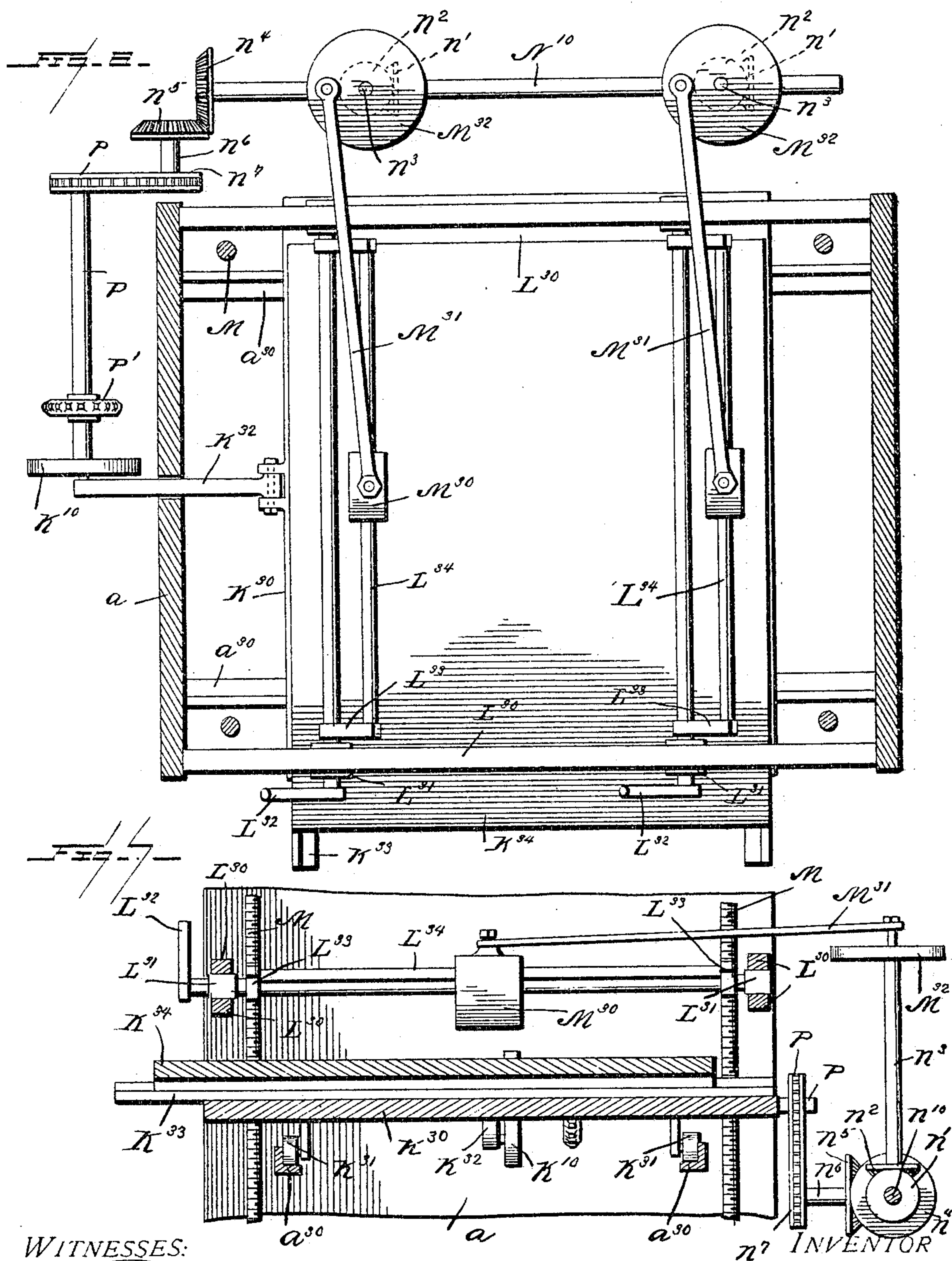
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UNITED STATES PATENT OFFICE.

PAUL H. BARZ, OF CHICAGO, ILLINOIS.

POLISHING-MACHINE.

No. 798,760.

Specification of Letters Patent.

Patented Sept. 5, 1905.

Application filed April 24, 1905. Serial No. 257,180.

To all whom it may concern:

Be it known that I, PAUL H. BARZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented new and useful Improvements in Polishing-Machines, of which the following is a specification.

This invention consists of a machine having a table on which a slab or piece of wood may
10 be placed, suitable means for attaching or clamping the same being provided. Above the table are rubbing-blocks, which have on their lower sides or faces suitable attrition means, such as sandpaper, polishing-pads, or
15 the like. These have slots so as to adjust them vertically, an especial feature being a longitudinal track in sections which may be adjusted so that at part of the work the rubbing devices will bear down harder or further
20 than at the other parts. The adjustment of this track is effected by means of screws, and springs also afford a resilient pressure on the wood. A reciprocating motion is given to the rubbing-blocks by means of a connecting-
25 rod to a crank or wheel. In connection with the above means are provided for adjusting the pressure on the wood, also for raising the bed on the table on which the wood may be clamped. This latter is effected by screws
30 having sprocket-wheels and a chain which moves all the screws from one point. Above the said screws is an L-shaped track, on which is mounted the table for carrying the wood.

Another feature is means for providing a
35 flow of water to the wood which is being acted upon.

In the accompanying drawings, Figure 1 is a front elevation of the machine. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1,
40 showing the means for raising the table. Fig. 3 is a detail in perspective of the track. Fig. 4 is a cross-section showing the cam-lever motion for raising or depressing the rubbers. Fig. 5 is a plan view. Fig. 6 is a horizontal
45 section on the line 6 6 of Fig. 1. Fig. 7 is a partial vertical cross-section of the machine on the line 7 7 of Fig. 1.

This machine has a frame A, with vertical parts *a* and cross-rods *a'*. The rubbing-
50 blocks B are mounted on suitable supports, such as cross-bars C, the ends of which extend into vertical slots C¹⁰ in the blocks. Adjustably mounted on these bars is a longitu-

dinal sliding frame D, having a pitman E, driven by a crank or wheel F. Reciproca-
tion of the frame D and bars C carries the
55 rubber-blocks B back and forth along the work. Adjustment is permitted at D'.

To regulate the pressure on the wood, I provide cams G G' at the corners of the ma-
chine, mounted upon the rocking rods *a'*. A
60 lever H actuates said cams, a connecting-rod H' being employed. To provide extra pressure or finish work at one side, I have an extra lever *h*, which operates the cams G' at one
65 side, a slot and pin at H¹⁰ in the connecting-rod H' permitting this action. Said cams act on rollers I, carried by longitudinal presser-bars resting on the blocks B.

The cross-bars C engage the rubbing-blocks
70 B in the slots C¹⁰ therein and permit the blocks to have an up-and-down movement independent of the rods. These blocks have upper grooves C¹¹, which engage the lower side of the frame or bars J J; but the blocks
75 can be pressed down by the cross-rods B¹⁰ to some extent by the part L without being disengaged from the bars J.

I provide a tank J' with a tube K with small perforations which extends over the top
80 of the wood and supplies a desired amount of water to the wood to be operated on.

L indicates adjustable presser-bars, which may, if desired, press down the rubbers at either end of the wood by means of the
85 hinged portions at the ends of said bars, which may be inclined at any desired angle by set-screws *l*. Above this bar is the bar L¹⁰, which bears upwardly against the rods C by means of springs 50 between the bars L
90 and L¹⁰.

The bed or table X of the machine is mounted on tracks *x*, supported on screws M at each corner, having sprockets *m* and a chain *m'*, which operates all screws at once. A suitable
95 crank *m*² operates same. The table is slidable laterally on the tracks *x* to bring all parts of the work under the rubbers.

The auxiliary rubbing device is located beneath the main table and consists of a longi-
100 tudinally-movable table, actuated by connections from the main driving-shaft, and sliding rubbing-blocks, which are transversely on the wood placed on the table. These blocks slide
105 on rods which are suitably mounted so as to press down on the wood. The table itself is

mounted on a bed having rollers. The table is mounted on slides which permit the table to be moved out laterally for inspecting the wood or placing it on the table. The rubbing-
 5 blocks are intended principally to cross-rub the wood, especially at its end, which do not always get sufficient rubbing.

K^{30} is the auxiliary bed or table, mounted on the longitudinal track a^{30} . This table is
 10 provided with rollers K^{31} and is reciprocable by means of a connecting-rod K^{32} to a crank K^{10} , which is operated by a chain connection to a sprocket on the main shaft. The bed K^{30}
 15 has lateral guides or ways K^{33} , upon which is mounted a table K^{34} , and upon this table the wood is attached.

L^{30} indicates two side bars attached to main frame, placed at front and rear of the same. L^{31} indicates sliding blocks placed in the same.
 20 L^{32} indicates presser-levers having short arms L^{33} pivoted to the blocks and operated by the levers L^{32} . Connected to these arms are cross-bars L^{34} , upon which slide the rubbing-blocks M^{30} . These rubbing-blocks have
 25 pitmen M^{31} , operated by cranks or crank-disks M^{32} , so as to produce a transverse motion to the blocks. These cranks are operated by any suitable mechanism, which may if desired have connections to the upper driving
 30 parts of the machine. As shown in the drawings, Fig. 6, this consists of a rear shaft N^{10} , having gears n^1 , which operate gears n^2 on the vertical shafts n^3 . On these are mounted the crank-disks M^{32} and to which the pitmen
 35 M^{31} are connected. At one end of the shaft N^{10} is a bevel-gear n^4 , engaging a gear n^5 . This is mounted on a short shaft n^6 and has a sprocket n^7 .

P is a drive-shaft having a sprocket p ,
 40 which may be connected by a chain to the sprocket n^7 .

P' is a driving-sprocket which may be connected to the upper main drive-shaft.

R is a water-tank, with a rubber tube r to the rubbing-blocks. 45

What I claim as new, and desire to secure by Letters Patent, is—

1. In a polishing-machine, in combination, a work-table, presser-bars extending lengthwise above the same, rubbing-blocks slidable
 50 on the bars and having vertical slots, horizontal cross-bars the ends of which extend into the slots and are movable up and down therein, and a pitman connected to the cross-bars.

2. In a polishing-machine, in combination, 55 a work-table, a pair of parallel presser-bars extending horizontally above the same, a rubbing-block slidable on each presser-bar, the blocks having vertical slots, a bar extending horizontally across the machine and extending
 60 at its ends into the slots, and a pitman connected to the bar.

3. In a polishing-machine, in combination, a sectional presser-bar the ends of which may be raised or lowered with respect to the other
 65 parts, and a rubbing-block slidable on the bar.

4. In a polishing-machine, the combination with a work-table, of rubbing-blocks and means to reciprocate the same, vertically-adjustable presser-bars bearing on top of the
 70 blocks, and supplemental sectional presser-bars bearing upon the blocks and adjustable to vary the pressure on different parts of the work.

In testimony whereof I have signed my name 75 to this specification in the presence of two subscribing witnesses.

PAUL H. BARZ.

Witnesses:

H. G. BATCHELOR,
 A. J. BELLE.